

What is claimed is:

1. A method for setting a playback environment for an ENAV recording medium, the method comprising:

determining availability of additional contents associated
5 with audio/video (A/V) data recorded on the ENAV recording medium, based on first data recorded on the ENAV recording medium;

loading the additional contents in a temporary storage area; and

10 reproducing the A/V data and the additional contents loaded in the temporary storage area according to the first data.

2. The method of claim 1, wherein the first data comprises
15 ENAV environment elements included in a start-up file.

3. The method of claim 1, wherein the first data comprises information about location where the additional contents can be accessed.

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4. The method of claim 1, wherein the first data is stored in the temporary storage area, prior to the A/V data being reproduced.

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5. The method of claim 2, wherein the first data comprises access information about the additional contents, the method further comprising:

loading the first data into the temporary storage area
5 prior to loading the additional contents in the temporary storage area.

6. The method of claim 2, wherein the ENAV environment elements comprises a playback right.

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7. The method of claim 2, wherein the ENAV environment elements comprises a region code.

8. The method of claim 2, wherein the ENAV environment
15 elements comprises a language of the additional contents.

9. The method of claim 2, wherein the ENAV environment elements comprises memory management information.

20 10. The method of claim 2, wherein the start-up file is loaded into the temporary storage area.

11. The method of claim 2, wherein the ENAV environment elements comprises a list of additional contents associated with
25 playback right information, wherein the additional contents are

differently designated according to the playback right information.

12. The method of claim 2, wherein the ENAV environment
5 elements comprises a list of additional contents associated with region code information, wherein the additional contents are differently designated according to the region code information.

13. The method of claim 2, wherein the start-up file is
10 a text markup language file.

14. The method of claim 2, wherein the ENAV environment
elements is received through a communication network from an external server.
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15. The method of claim 1, wherein the first data
comprises a list of additional contents.

16. The method of claim 15, wherein the list of additional
20 contents updates any additional contents information recorded on the ENAV recording medium.

17. The method of claim 1, wherein at least a portion of
the additional contents associated with the A/V data is
25 preloaded in the temporary area in advance of reproducing the

A/V data, so that the A/V data can be seamlessly reproduced in synchronization with respective additional contents.

18. The method of claim 1, wherein the temporary storage
5 area is in a semiconductor storage device.

19. The method of claim 1, wherein the temporary area has
a predetermined capacity.

10 20. The method of claim 1, wherein the temporary area is
36 Mbytes.

21. The method of claim 1, wherein the step of storing the
additional contents comprises:
15 setting a language of the additional contents; and
allocating a space in the temporary storage area based on
the first data to store the additional contents.

22. The method of claim 21, further comprising:
20 processing setup information designated within the first
data.

23. The method of claim 22, wherein the setup information
comprises information related to a menu screen.
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24. The method of claim 1, wherein the step of reproducing the A/V data comprises:

synchronizing reproduction of the additional contents and the A/V data.

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25. The method of claim 1, further comprising:

preloading the additional contents in the temporary storage area in advance of reproducing the A/V data recorded on the ENAV recording medium.

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26. The method of claim 1, further comprising:

outputting the additional contents in the temporary storage area at least at the same time as reproducing the A/V data recorded on the ENAV recording medium.

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27. The method of claim 1, wherein new additional content is preloaded in the temporary storage area as storage space in the temporary storage area becomes available when the additional content stored in the temporary storage area is reproduced.

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28. The method of claim 1, wherein the additional contents consist of a markup language file.

29. The method of claim 1, wherein the additional contents consists of an image file.

30. The method of claim 1, wherein the additional contents consists of a sound file.

5 31. An ENAV recording medium comprising:
audio/video (A/V) data;
access information to additional contents associated with
the A/V data; and
start-up information for setting playback environment.

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32. The medium of claim 31, wherein the additional contents are stored on the recording medium.

33. The medium of claim 31, wherein the additional
15 contents are stored in a content provider remotely accessible
through a communications network.

34. The medium of claim 31, wherein the start-up
information comprises the access information to the additional
20 contents.

35. The medium of claim 34, wherein a memory is included
in an ENAV player device, and wherein the start-up information
25 is preloaded into the memory, before the A/V data is reproduced

by the player.

36. The medium of claim 31, wherein the start-up
information further comprises information about a playback right
5 of the recording medium.

37. The medium of claim 31, wherein the start-up
information further comprises information about a region code.

10 38. The medium of claim 31, wherein the start-up
information further comprises information about a language of
the additional contents.

39. The medium of claim 31, wherein the start-up
15 information further comprises information about website
connection limitations.

40. The medium of claim 31, wherein the start-up
information further comprises information about memory
20 management.

41. The medium of claim 31, wherein the start-up
information further comprises information about playback
environment.

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42. The medium of claim 31, wherein the start-up information is stored as a markup language file.

43. The medium of claim 31, wherein the A/V data is
5 recorded on a first segment of the recording medium.

44. The medium of claim 31, wherein the access information is recorded on a second segment of the recording medium.

10 45. The medium of claim 31, wherein the additional contents information is recorded on a third segment of the recording medium.

46. The medium of claim 31, wherein the start-up
15 information is recorded on a fourth segment of the recording medium.

47. The medium of claim 31, wherein the start-up information is included in a start-up file.
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48. The medium of claim 47, wherein the start-up file comprises a plurality of playback right information for designating a plurality of additional content categories.

25 49. The medium of claim 47, wherein the start-up file

comprises a plurality of region code information for designating a plurality of additional content categories.

50. An ENAV medium player system comprising:

5 an audio/video (A/V) player engine for reproducing A/V data recorded on an ENAV medium; and

 an ENAV player engine for reproducing in synchronization with the A/V data associated additional contents based on ENAV environment elements recorded on the ENAV medium.

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51. The player of claim 50, wherein the ENAV environment elements are included in a start-up file that is loaded into a temporary storage medium.

15 52. The player of claim 50, wherein the ENAV environment elements comprise information about a location where the additional contents can be accessed.

53. The player of claim 50, wherein the ENAV environment
20 elements are stored in a temporary storage area, prior to the A/V data being reproduced.

54. The player of claim 51, wherein the start-up file
comprises information about the additional contents to be loaded
25 into the temporary storage area, before the A/V data is

reproduced.

55. The player of claim 51, wherein the start-up file comprises playback right information.

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56. The player of claim 51, wherein the start-up file comprises region code information.

57. The player of claim 51, wherein the start-up file
10 comprises information about language of the additional contents.

58. The player of claim 51, wherein the stat-up file comprises memory management information.

15 59. The player of claim 51, wherein the start-up file is a markup language file.

60. A method of playing back ENAV data recorded on a recording medium, the method comprising:

20 determining if a recording medium is an ENAV recording medium;

playing audio/video A/V data recorded on the recording medium, if the recording medium is not an ENAV recording medium;
and

25 playing additional contents in synchronization with the

A/V data recorded on the recording medium, if the recording medium is an ENAV recording medium;

wherein a start-up file comprising ENAV environment elements is preloaded into a memory prior to playing the
5 additional contents.

61. The method of claim 60, wherein the start-up file comprises website access information, the method further comprising:

10 limiting access to at least one website according to the website access information.

62. The method of claim 60, wherein the start-up file comprises website access information, the method further
15 comprising:

providing access to at least one website according to the website access information.

63. The method of claim 60, wherein the start-up file
20 comprises server access information, wherein the server comprises the additional contents.

64. An ENAV player device for playing back ENAV data recorded on a recording medium, the player comprising:

25 a detecting unit for determining if a recording medium is

an ENAV recording medium;

an first engine for playing audio/video (A/V) data recorded on the recording medium, if the recording medium is not an ENAV recording medium;

5 a second engine for playing additional contents in synchronization with the A/V data recorded on the recording medium, if the recording medium is an ENAV recording medium; and

a memory, wherein a start-up file comprising ENAV environment elements are preloaded into the memory prior to
10 playing the additional contents.

65. The player of claim 64, wherein the start-up file comprises website access information for limiting access to at least one website according to the website access information.

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66. The player of claim 64 , wherein the start-up file comprises website access information for providing access to at least one website according to the website access information.

20 67. The player of claim 64, wherein the start-up file comprises server access information, wherein the server comprises the additional contents.

68. The player of claim 64, wherein the start-up file
25 comprises menu setting information.

69. A method for setting a playback environment for an enhanced navigation recording medium, the method comprising:

determining availability of additional contents associated
5 with audio/video (A/V) data recorded on the enhanced navigation recording medium, based on start-up data recorded on the enhanced navigation recording medium;

loading the additional contents in a first temporary storage area; and

10 reproducing the A/V data and the additional contents loaded in the first temporary storage area according to the first data.

70. The method of claim 69, wherein the start-up data is
15 stored in a second temporary storage area, prior to the A/V data being reproduced.